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Post-Operative Nursing Care of the Renal Transplant Patient

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Reflective Journal

Since November of 2020, I have been working in the Renal & Organ Transplant unit at a major metropolitan hospital. The purpose of this position is to orient myself to patient care in a hospital setting and learn about holistic patient care surrounding solid organ transplants including kidneys, livers, and lungs. This experience allowed me to answer questions for my future career as a nurse. Some of these questions included: How will this experience impact where I want to work long term? Will this experience direct me toward graduate school? How can I best teach and promote compliance in my patients?

Working as a nurse associate will greatly impact my future profession and desire to return to graduate school. This experience has increased my confidence working with patients and their families, as well as collaborating with interdisciplinary teams. It began to teach me time management and prioritization skills that will be required of me as a nurse. This position has also taught me technical skills including charting, phlebotomy techniques, and use of equipment such as bladder scanners and suctioning equipment. This experience has made me realize my desire to continue my education in the future to be in a better position to care and advocate for my patients. Graduate school would provide me with a deeper understanding of evidence-based practices and allow more autonomy when caring for patients.

Working as a nurse associate was also important for fostering professional and personal growth. It has allowed me to have a better understanding of what the role of a professional nurse looks like and has allowed me to apply the knowledge I have gained during my time as an undergraduate and nursing student. It also has allowed me the opportunity to practice interacting with patients and communicating effectively with them. Building a trusting professional relationship with a patient is a learned skill that requires significant practice. With this

experience, I have had over 120 hours of patient contact and my confidence communicating with patients has greatly increased. This experience has allowed me to learn from other nurse associates, certified nursing assistants, and nurses. I learn something new each shift that I will be able to take with me and apply to my career as I transition into the professional practice.

The most significant responsibilities I performed during my honors internship were monitoring and assessing patients. Every four hours I would assess and monitor anywhere from nine to twenty patients. During these rounds, every four hours, I would assess both physical well-being and psychological needs. These assessments included vital signs, strict intake and output, physical comfort and pain levels, surgical wound drains, and reactions to medications and treatments including blood transfusions and insulin drips. Once I gathered data from my patients, I would have to analyze if any abnormalities were present, document my findings, and report to the patient's care team if needed.

Keeping transplant patients safe is a huge task and often a challenge. The unit has meticulous rules to prevent falls and protect patients. Many patients receiving pain medications through epidurals or IVs are very weak after surgical procedures, or from end stage organ failure. Fall bundles include sensitive bed and chair alarms, gait belts and assistive devices, non-slip socks, and mandatory levels of staff assistance (i.e., assist X1, assist X2, stand by assistance, and up ad lib). Many patients were not compliant with this unit policy and some patients refuse fall bundles. This makes it difficult to ensure their safety and was always a concern for those at risk for falls. For these patients, I often conducted more frequent wellness checks to ensure they were ambulating safely and there has been no change in their condition.

Patient teaching post-transplant is difficult due to considerable physical discomfort and emotional stress after surgery. Many patients feel completely overwhelmed due to their physical

limitations and weakness after surgery. I have seen these patients become overwhelmed very easily, so they need very simple, direct, and small amounts of teaching and reinforcement at a time.

One very important lesson I have learned through my position as a nurse associate is how to connect with patients and care for them in times of need. I have also learned how to own up to and learn from my mistakes and admit when I do not know the answer. I have found I learn the most through patient interactions as well as watching other co-workers interacting with patients. I have also discovered that the patient's greatest need is to be listened to. Many patients feel as though care providers do not understand their needs and what goes through their heads when receiving care at a hospital. A major part of patient satisfaction, creating and reaching common goals, and ensuring quality patient outcomes is assessing and listening to the needs and thoughts of the patient.

My course work at the Eleanor Mann School of Nursing prepared me very well for this experience. I was able to adapt and catch on fairly quickly. During our pre-nursing semester, I had an informatics class that has greatly helped me navigate and understand how to use the electronic health record system. Health assessment class and clinicals have taught me how to chart and document assessments, as well as identify what is abnormal when assessing patients. Pathophysiology and Med-Surg have allowed me to understand physiologic processes behind disease and use critical thinking to understand interventions and possible findings when I am assessing patients. Mental health has allowed me to better communicate with patients professionally in times of great emotional and physical distress.

Abstract

Kidneys are the most commonly transplanted organ in the United States. All patients who receive a renal transplant must be on lifelong immunosuppressants to prevent rejection of the donor organ. The majority of patients do not take their immunosuppressant medications as instructed, making noncompliance a huge issue for medical professionals. The purpose of this literature review is to explore what evidence-based techniques nurses should employ to increase the long-term compliance of immunosuppressants in renal transplant patients. A literature review was performed of fifteen studies to identify interventions that nurses can employ to increase immunosuppressant compliance. CINAHL and Medline were searched using Boolean phrases, and studies were sorted using search limiters and inclusion and exclusion criteria. All studies included in this literature review are peer-reviewed academic journals.

Nurses can assess motivating factors and barriers to learning prior to teaching renal transplant patients about immunosuppressant therapy using evidence-based tools and questionaries. While teaching, nurses should promote self-advocacy and accountability to prevent both intentional and unintentional noncompliance to long-term immunosuppressant medications. Increased compliance can be achieved with the use of mHealth applications and the SystemsCHANGE approach. Intentional noncompliance can be reduced with thorough teaching of correct medication use, side effects, and results of noncompliance. Nurses can use individualized assessments, tools, and technology to increase immunosuppressant compliance and decrease long term complications associated with noncompliance. Future research regarding compliance with immunosuppressants is needed to provide nurses with evidence-based interventions, and quantitative longitudinal studies could provide insight to the effects of interventions long term.

Introduction

In 2019 alone, there were 23,401 kidney transplants performed, making it the most transplanted organ in the United States (UNOS, 2020). The number of renal transplants increases significantly each year. Between 2018 and 2019, there was a 10.6% increase in the number of renal transplants (UNOS, 2020). Due to the increased prevalence of this procedure, need for post-transplant evidence-based practices (EBPs) are vital to increase quality patient outcomes and reduce risk for transplant rejection. Researching and implementing evidence-based nursing care surrounding immunosuppressant compliance is critical to preventing patient complications and promoting quality of life. Noncompliance of immunosuppressant medications increases the risk of transplant rejection and decreases quality of life for renal transplant patients. Studies have shown 76% of renal transplant patients are considered noncompliant with immunosuppressive treatment. Of these noncompliant patients, 63% are unintentionally noncompliant and 13% are intentionally noncompliant (Griva et al., 2018).

Therefore, the primary goal of this literature review is to explore what evidence-based education techniques nurses should employ to increase the long-term compliance of immunosuppressants in renal transplant patients.

Methods

Study Design

A literature review was performed related to the question: “What evidence-based education techniques should nurses employ to increase the long-term compliance of immunosuppressants in renal transplant patients?” The databases searched to answer this research question were CINAHL Complete and Medline Complete. The Boolean phrases “renal transplant” or “kidney transplant,” “medication compliance,” and “ nursing care” were used to

search these databases. To further refine search results, the following search limiters were used: full text, academic journals, peer reviewed, English language, and year limits from 2001 to 2021.

Inclusion/Exclusion Criteria

Articles must have met the following criteria to be included in the literature review: (A) the journal topic must have been about renal transplant patients; (B) patient education, medical adherence, or long-term immunosuppressant noncompliance must have been a topic addressed; (C) scholarly journal article or peer reviewed journal, (D) published in the last 20 years; (E) full text was available. Articles were excluded from the literature review if (A) the interventions or assessments explained in the article was not within the nursing scope of practice, and (B) studies included participants other than renal transplant patients.

Search Results

Fifteen articles were chosen from the search of both CINAHL and Medline databases (twelve from CINAHL and three articles from Medline). Original search results from CINAHL populated 441 search results. Articles were removed according to the inclusion and exclusion criteria listed above until twelve articles remained. Original search results from Medline populated 5,735 search results. Articles were removed according to the inclusion and exclusion criteria listed above until three articles remained. Of the fifteen articles, two were cross sectional studies, six were quantitative studies, and seven were qualitative studies.

Results

Assessment of Barriers and Protective Factors

Results from the literature review confirm that nursing interventions may increase the compliance of long-term immunosuppressant use in renal transplant patients. Consistently, researchers found that identifying barriers to education and compliance, as well as identifying

motivating factors of the individual patient is critical to ensuring compliance with immunosuppressant therapies (Chisholm et al., 2005; Cossart et al., 2019; Griva et al., 2018; Hass, 2016; Leite et al., 2018).

Before a plan of teaching can be made for a patient, assessment of both these factors must be completed. To assess barriers and motivators, nurses can use scales like the Transplant Effects Questionnaire, Beliefs about Medications Questionnaire, Multidimensional Scale of Perceived Social Support, Depression and Anxiety Scale, and Medication Adherence Reports Scale (Griva et al., 2018) and take into consideration socioeconomic factors like ability to pay for medications and social support they have (Hass, 2016). Nurses can also specifically assess motivation or protective factors of each patient. The results of one study indicated the following characteristics as protective factors: female sex, younger age, lower average income, and had transplants more recently (Chrisholm, 2005).

Forgetfulness

Studies have found that the majority of patients, 76%, are unintentionally noncompliant with their immunosuppressant medications, and the majority of those who are unintentionally noncompliant do so because of forgetfulness (Griva et al., 2018). Studies provided evidence of the effectiveness of mobile health (mHealth) applications as a service that provides medication reminders to patients. These mHealth applications also promote self-advocacy and empowerment by allowing individuals to monitor and manage their health after renal transplant much like a chronic disease is managed (O'Brien, 2020). These applications allow patients to monitor self-care, medication adherence, and set goals for their health (O'Brien, 2020). While study participants report general chronic illness apps as helpful, an app specifically designed for renal transplant recipients has been identified as necessary.

Intentional Noncompliance

While the majority are unintentionally noncompliant, 13% of patients are intentionally noncompliant. Griva et al. (2020) determined that many patients who are intentionally noncompliant with immunosuppressants do so because of medication side effects. Education must include side effects and possible ways to improve these side effects to encourage patients to remain compliant. Intentional noncompliance can also occur when the patient has misconceptions about their condition or does not have the proper resources to obtain medications. Assessment of patient's beliefs and knowledge about their condition, as well as resources available to them, can reduce intentional noncompliance due to these factors.

Systematic Approach

A systematic approach can be used to plan, provide interventions, assess, and follow up with outcomes (Russell et al., 2020). Russell et al. (2020) introduced the SystemCHANGE approach as a way to manage compliance after transplants. The planning set of this approach entails setting up electronic self-monitoring, setting medication compliance goals, listing solutions to possible problems, and assessing an individual's daily habits. The nurse and patient then complete the teaching and follow the plan outlined in step one. Lastly, there is a follow up with the patient at one, two, three, four, and five months. During this follow up, tracked compliance is assessed and interventions are changed according to what is working and what is not (Russell et al., 2020).

Discussion

Evidence-based techniques nurses can employ to increase the long-term compliance of immunosuppressants in renal transplant patients include interventions to assess for barriers, motivating factors, and daily habits. Assessment of these factors is a major component of

effective patient teaching and creating individualized medication plans. Nurses can create an environment of empowerment for their patients by educating them on how medications are to be taken as well as why the meds are to be taken, side effects, and possible solutions to medication issues. Nurses can empower patients to keep tract of medication compliance using technology such as mHealth applications. Nurses can also employ systematic approaches to create a collaborative way to manage immunosuppressant adherence, using procedures like SystemCHANGE.

This review is limited by the use of self-reported data in many of the studies. Researchers in many of the studies used tools and assessments that require patients to self-report habits and compliance to medications. This allows for the possibility of false or fabricated reports, which would skew results. There were a limited number of available articles on immunosuppressant compliance post-renal transplant. Therefore, this study is limited by studies and articles available on this topic. Additionally, few of the available studies are quantitative studies. This is a limitation due to lack of data that could show statistical significance or insignificance of the interventions employed. There are many underexplored areas for immunosuppressant compliance and nursing interventions. Some of these gaps include lack of data on long-term compliance after evidence-based teaching methods have been employed, and how rates of kidney rejection are affected by proper immunosuppressant teaching and use. There is a need for future research to include long term studies of targeted interventions that are believed to increase immunosuppressant compliance.

Numerous implications exist for evidence-based nursing interventions that promote immunosuppressant compliance. First, nurses can use these interventions to increase compliance, therefore decreasing hospital readmission rates and rejection of the transplanted kidneys. Second,

nurses can use these interventions to build trust and rapport with patients, which increases quality patient outcomes. Lastly, proper teaching empowers patients to manage their conditions and advocate for their health. To increase immunosuppressant compliance, hospital policies, protocols, and training for staff must occur. Hospital policies and procedures should require assessment of barriers and protective factors of patient learning. Policies and procedures should also include key teaching interventions and topics that should be emphasized with the patient. Training and education for nurses and other care coordinators should be provided to address these policies and procedures. Increased use of care coordinators can bridge gaps in patient care and keep patients on track with their treatment plan. These care coordinators can ensure the patient has consistent follow up care to reassess the patient and provide needed interventions.

Conclusion

Kidneys are the most commonly transplanted organ in the United States and each year the number of renal transplants performed is increasing significantly. Effective interventions to increase immunosuppressant compliance are vital to improving patient outcomes and decreasing the morbidity and mortality due to transplant rejection. Previous studies outline evidence-based interventions that can be employed to improve long-term immunosuppressant compliance. These interventions can be translated into the professional nursing practice by enforcement through hospital policies, procedures, and employee education.

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